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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,600	08/16/2001	Stefan Thiem	LNUP:104_US_	3014

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EXAMINER

WALLENHORST, MAUREEN

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/931,600

Applicant(s)

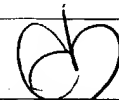
THIEM ET AL.

Examiner

Maureen M. Wallenhorst

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☒ Claim(s) 25 and 26 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

2. Claims 25-26 are objected to because of the following informalities: On line 1 of claim 25, the phrase "automatic satiner" is misspelled.

Appropriate correction is required.

3. Claims 23-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

On line 2 of claim 23, the phrase "the fill level" lacks antecedent basis.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3-4, 6-7, 22 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Ljungmann.

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Ljungmann teaches of a staining apparatus for the staining of tissue specimens on microscope slides. The apparatus comprises a plurality of processing stations, including rinsing stations. The rinsing stations 3 include containers or vessels 9 for rinsing water baths. Rinsing water is provided to the vessels 9 via water filling pipes 10 communicating with a water intake 11. There is also a drain hose 12 connected to the vessels 9 for drainage of water from the rinsing baths. This hose 12 is connected to a water outlet 13. The vessels 9 are arranged with other processing stations in a number of horizontal rows placed above one another on a stepped foundation or base 16. See Figures 1 and 2 in Ljungmann. Support rails 21 extend along each side of the ascending rows of vessels to provide support. In operation, baskets containing microscope slides are transported by a transport mechanism 17-20 having a hoisting device 17 arranged to move over the vessels and to place the baskets in or take them up from the vessels, and to transfer them between the different stations. Therefore, the device taught by Ljungmann includes a plurality of processing stations, a transport device for delivering tissue specimens into and out of the processing stations, and at least one running water station having an inflow 10 and an outflow 12.

7. Claims 1, 3-6, 8-11, 13, 22 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al.

Takahashi et al teach of a liquid treating apparatus for a biological sample. The apparatus comprises a cabinet 7 having a lower plate 8 and an upper plate 9. A plurality of rinsing vessels 10 are located on the lower plate 8, and a plurality of chemical solution vessels 11 are arranged on both the lower and upper plates. A rinsing water supply pipe 12 for supplying rinsing water is inserted in a lower section of each rinsing vessel 10 through a hole or connector fitting formed in

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a wall of the rinsing vessels 10 at a position corresponding to the rinsing water supply pipe 12. When a rinsing vessel 10 is mounted on the lower plate 8, the rinsing water supply pipe 12 is inserted through the hole or connector fitting into the rinsing vessel 10. A plurality of spouts 12a are formed in the wall of the rinsing water supply pipe 12. In operation, a staining basket 13 is placed into a rinsing vessel 10, and then water is spouted through the spouts 12a toward a lower part of the inner surface of the rinsing vessel 10 to generate water currents. The rinsing water supply pipes 12 are detachably fixed with a coupling nut 17 to the front wall of a water supply duct 16 or connector rail disposed on a back part of the lower plate 8 and connected to a water supply system. A plurality of pipe fittings are attached to the front wall of the water supply duct 16 for connecting to the supply pipes 12. Water spouted into the rinsing vessels 10 from the water supply pipes 12 fills up the rinsing vessels 10, overflows the rinsing vessels 10 onto the lower plate 8, and is drained through a drain pipe into a drainage station. See lines 38-67 in column 4 and lines 1-30 in column 5, and Figures 1, 4 and 14-17 of Takahashi et al. The rinsing vessels are arranged in a horizontal row on the lower plate 8. In operation, a basket 13 holding glass slides with cytological samples thereon is transported between a plurality of chemical solution vessels 11 for staining of the samples, and then to the rinsing vessels 10 so that the slides can be washed with water. Figure 5 of Takahashi et al depicts feet for supporting the lower plate 8.

8. Claims 1-4, 6, 8-11, 13-15, 19-20, 22 and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Becker et al.

Becker et al teach of a method and apparatus for staining biological material on slides. The apparatus comprises a plurality of vessels 121 for the staining of the slides, and a plurality of

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vessels 142 for the water washing and rinsing of the slides. The apparatus includes a plurality of wash manifolds 144, which are in fluid communication with a source of wash water under pressure. The manifolds 144 each contain a plurality of upwardly facing orifices 146 that are located to direct the water flow into the spaces between the slides 90 inserted into the vessels 142. Excess water leaves the vessels 142 through an overflow tube 148. A conduit 150 connects each of the manifolds 144 to a separate regulator valve 44, 45 and 46. The regulator valves are positioned in a common water supply conduit 42. A solenoid valve 40 is positioned at one end of the conduit 42, and is in communication with a pressurized water source designated by arrow 158 in Figure 11. Overflow wastewater drains from the vessels 142 into a common waste tray 160 and is carried away by a drain fitting 162 and a waste hose 164. See Figure 11 and lines 28-56 in column 8 of Becker et al. In operation, slides containing biological samples thereon are successively immersed into and removed from the various staining and rinsing vessels. Individual and variable timer means associated with each of the vessels controls the length of immersion of the slides into the vessels, and the liquid flow rates. Therefore, Becker et al teach of an apparatus for treating cytological specimens in a plurality of processing stations, wherein the apparatus includes a running water bath having an inflow regulated by a series of valves, such as a solenoid valve.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. For a teaching of Takahashi et al, see previous paragraphs in this Office action.

Takahashi et al fails to teach of the rinsing vessels 10 supported by spaced bars in a plurality of side-by-side horizontal rows on the lower plate 8. However, such a configuration would have been obvious to one of ordinary skill in the art at the time of the instant invention since Takahashi et al teach that in known prior art liquid processing and staining devices having a plurality of processing stations as depicted in Figure 24 of Takahashi et al, the chemical staining solution vessels and rinsing vessels are supported on rails in a plurality of side-by-side horizontal rows. See the vessels 2 arranged in side-by-side rows on the upper level of the device depicted in Figure 24 of Takahashi et al.

Takahashi et al also fail to teach of a plurality of water supply ducts 16 or connector rails located on the lower plate 8. However, such a configuration would have been obvious to one of ordinary skill in the art at the time of the instant invention so as to supply water to a greater number of rinsing vessels 10.

12. Claims 2, 14-21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al in view of Becker et al. For a teaching of Takahashi et al and Becker et al, see

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previous paragraphs in this Office action. Takahashi et al fail to teach that the water inflow into the rinsing vessels 10 is regulated by means of a plurality of valves.

Based upon the combination of Takahashi et al and Becker et al, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to regulate the flow of water to the rinsing vessels 10 taught in the apparatus of Takahashi et al by means of valves since Becker et al teach that valves in a water supply line to a plurality of rinsing vessels in a slide staining apparatus serve to control the amount and flow rate of water to the vessels so that biological material on the slides is not washed away. It also would have been obvious to one of ordinary skill in the art to use solenoid or 3/2 way valves as the valves in the water supply line taught by Takahashi et al since Becker et al teach that solenoid and other well-known types of valves can be used in water supply lines in accordance with the specific type of operation and control desired in the apparatus.

13. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al in view of Becker et al as applied to claims 2, 14-21 and 26 above, and further in view of Repasi et al. For a teaching of Takahashi et al and Becker et al, see previous paragraphs in this Office action. Takahashi et al fail to teach of a sensor in the rinse vessels that serves to detect when the vessels are full.

Repasi et al teach of a process and apparatus for the treatment and staining of a histological specimen. The apparatus comprises a process chamber 10 into which a specimen to be treated is inserted. The chamber is connected to a plurality of treatment solutions 22a-22l and 20a-20d through a conduit 14 and selector valves 16 and 18. Mounted on the wall of the process chamber 10 is a level sensor 24. A controller 26 senses the output of the sensor 24. When the

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controller 26 senses that the process chamber is full, the controller 26 terminates a fill sequence by closing a valve 46. See figure 1 in Repasi et al.

Based upon the combination of Takahashi et al, Becker et al and Repasi et al, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to include a sensor in the rinse vessels taught by Takahashi et al to sense when the vessels are full since Repasi et al teach that a fill-detect sensor in a cytological staining/rinsing vessel is a common means for detecting when the vessel is full of treatment or rinse solution so that the flow of the solution to the vessel can be stopped before an overflow condition occurs.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Please make note of: Thiem et al, McCormick, Tabata, Goldbecker et al, Howells et al, Takeuchi, Keefe and Louder et al who all teach of different types of histological tissue processing devices.

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen M. Wallenhorst whose telephone number is 571-272-1266. The examiner can normally be reached on Monday-Wednesday from 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maureen M. Wallenhorst
Primary Examiner
Art Unit 1743

mmw

March 8, 2004

Maureen M. Wallenhorst
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PRIMARY EXAMINER
GROUP ~~1700~~ 1700